

REMARKS

Claims 1 and 31 are amended to further define the catalyst. Support for this amendment can be found in the specification at, for example, ¶¶ [0003] and [0019], and original claims 30 and 35. Claim 35 is canceled by this amendment.

REJECTIONS UNDER § 102

A. *Alt*

Independent claim 1 and various claims that depend therefrom were rejected under § 102(b) as being anticipated by *Alt* (U.S. Patent No. 6,217,607). Applicants respectfully request reconsideration.

Claim 1 recites a medical implant having “a catalyst that promotes the decomposition of hydrogen peroxide.” The catalyst is covered by or contained in a filter that “has pores of sufficiently small size to retard the passage of red blood cells and white blood cells.”

An example of a filter covering a catalyst is demonstrated in the embodiment shown in FIG. 1 and described in ¶¶ [0016]-[0017] of the present application. A catalytic layer 15 is disposed over an implant 16. A meso-porous layer 14 is disposed over catalytic layer 15. Meso-porous layer 14 functions as a filter by permitting the flow of fluid into catalytic layer 15, while preventing the entry of particles and other materials, such as blood cells. An example of a filter containing a catalyst is demonstrated in the embodiment shown in FIG. 2 and described in ¶ [0024] of the present application. A meso-porous layer 24 is disposed over an implant 26, and catalysts 25 are contained within the meso-porous layer 24.

Alt describes a stent having three different layers: an innermost tubular core, an intermediate layer, and an outermost layer (see col. 4, lns. 29-35). The outermost layer is made of a ceramic-like material such as iridium oxide (see col. 4, lns. 13-14), which can have catalytic properties (see col. 10, lns. 10-24).

However, unlike the invention of claim 1, Applicants respectfully submit that *Alt* does not disclose a filter having “pores of sufficiently small size to retard the passage of red blood cells and white blood cells.” The Office Action contends that reference number 80 in FIG. 3, which is identified by *Alt* as an “outermost layer” (see col. 7, ln. 46), constitutes a filter layer. The Office Action alleges that this filter layer (i.e., outermost layer 80) “prevents thrombus formation . . . and inflammation . . . which result from red and white blood cells,” and thus, this

filter layer (outermost layer 80) “retards passage of white and red blood cells since it stops thrombi from forming.”

Although outermost layer 80 in *Alt* may prevent thrombus formation, Applicants respectfully disagree that outermost layer 80 works by “retard[ing] passage of white and red blood cells,” as suggested by the Office Action. The ability of outermost layer 80 to prevent thrombus formation has nothing to do with “retard[ing] passage of white and red blood cells.” Rather, *Alt* indicates that outermost layer 80 prevents thrombus formation by virtue of its biocompatibility. Tissue irritation and chemical reactivity are known to induce thrombus formation, and as such, *Alt* explains that “these materials [are] exemplary of a biocompatible layer that serves a primary purpose of avoiding tissue irritation and thrombus formation. This outermost layer may be deposited as an inert coating . . .” (col. 7, lns. 48-52). Nothing in *Alt* discloses, either expressly or inherently, that outermost layer 80 “has pores of sufficiently small size to retard the passage of red blood cells and white blood cells,” as recited by claim 1.

In col. 10, lns. 10-25, *Alt* indicates that iridium oxide (in the outermost layer) “has catalytic properties, capable of promoting a reaction in which hydrogen peroxide (H_2O_2) is converted into water (H_2O) and oxygen (O_2).” Thus, in lieu of arguing that outermost layer 80 represents a filter, the Examiner may instead argue that outermost layer 80 of *Alt* represents “a catalyst that promotes the decomposition of hydrogen peroxide.” However, even if it were the case that outermost layer 80 represents a catalyst in the *Alt* stent, there is no filter that covers or contains the catalyst, as recited by claim 1.

For at least these reasons, Applicants respectfully submit that claim 1, and the claims that depend therefrom, are not anticipated by *Alt*. Accordingly, favorable consideration and withdrawal of the rejection are respectfully requested.

B. Davidson

Independent claim 1 and various claims that depend therefrom were rejected under § 102(b) as being anticipated by *Davidson* (U.S. Patent No. 5,690,670). Applicants respectfully request reconsideration.

Davidson describes medical implants fabricated from low modulus Ti-Nb-Zr alloys (see Abstract). The surface of the implant may be treated by an oxygen diffusion hardening process to create an oxide film (e.g., titanium oxide) on the implant (see col. 6, ln. 61 – col. 7, ln. 11).

However, *Davidson* contains no description of “a catalyst that promotes the decomposition of hydrogen peroxide.”

The Office Action suggests that the titanium oxide described in *Davidson* represents the catalyst in the invention of claim 1. However, there is no indication in *Davidson* that titanium oxide acts as “a catalyst that promotes the decomposition of hydrogen peroxide,” nor is any such evidence provided by the Office Action.

Furthermore, for any structure in *Davidson* that is purported by the Office Action to constitute a filter, such structure is not disclosed to have “pores of sufficiently small size to retard the passage of red blood cells and white blood cells,” as recited by claim 1.

For at least these reasons, Applicants respectfully submit that claim 1, and the claims that depend therefrom, are not anticipated by *Davidson*. Accordingly, favorable consideration and withdrawal of the rejection are respectfully requested.

REJECTIONS UNDER § 103

Claims 21, 22, 28, and 29 were rejected under § 103(a) as being unpatentable over *Alt* in view of *Smalley et al.* (U.S. 2002/0085968). Claims 31-33 and 35 were rejected under § 103(a) as being unpatentable over *Kula et al.* (U.S. Patent No. 6,325,825) in view *Alt*. Applicants respectfully request reconsideration.

Both of the above rejections rely on *Alt* for its purported disclosure of a filter. However, as explained above, *Alt* does not disclose a filter having “pores of sufficiently small size to retard the passage of red blood cells and white blood cells.” And as explained in Applicants' previous submissions, neither *Smalley* nor *Kula* discloses such a filter. Thus, even if *Alt* could properly be combined with *Smalley* or *Kula* in the manner suggested by the Office Action, these combinations would still not include all the required elements of claims 1 and 31.

For at least these reasons, Applicants submit that claims 1 and 31, and the claims that depend therefrom, are patentable over the references cited in the rejections. Accordingly, favorable consideration and withdrawal of the rejections are respectfully requested.

CONCLUSION

Applicants respectfully submit that the present application is in condition for allowance. The Examiner is invited to contact Applicants' representative to discuss any issue that would expedite allowance of this application.

The Commissioner is authorized to charge all required fees, fees under § 1.17, or all required extension of time fees, or to credit any overpayment to Deposit Account No. 11-0600 (Kenyon & Kenyon LLP).

Respectfully submitted,

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